

Notice of Allowability

Application No.

09/934,289

Examiner

Mary E. Mosher, Ph.D.

Applicant(s)

BUSFIELD, SAMANTHA J.

Art Unit

1648

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/18/2003.
2. ☒ The allowed claim(s) is/are 23-27, 30-32 and 34-42.
3. ☒ The drawings filed on 08 March 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jean Silveri on June 21, 2004.

The application has been amended as follows:

The claims have been amended as shown on the attached listing of all claims.

In addition, the claims have been renumbered for issue as follows:

| Issue | Original | Issue | Original |
|-------|----------|-------|----------|
| 1 | 26 | 10 | 30 |
| 2 | 27 | 11 | 31 |
| 3 | 39 | 12 | 36 |
| 4 | 32 | 13 | 40 |
| 5 | 34 | 14 | 38 |
| 6 | 23 | 15 | 35 |
| 7 | 24 | 16 | 42 |
| 8 | 25 | 17 | 37 |
| 9 | 41 | | |

An additional examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The first paragraph of the specification has been amended as shown on the attached page.

The following is an examiner's statement of reasons for allowance:


In claim 23 and similar claims, "encoded by a nucleic acid" was changed to a product-by-process recitation "produced by expression of a nucleic acid", to more clearly distinguish the scope of the claims from other claims which explicitly define the structure of the claimed polypeptide by direct reference to an amino acid sequence (e.g. claim 26). In addition, "or a complement thereof" was deleted; if there actually is a polypeptide encoded by the complementary (antisense) nucleotide strand, the specification does not disclose what the polypeptide is or how to use it. Also, the language defining the variant polypeptide in relation to its functioning with TANGO-69-receptor ligands has been modified to limit the ligands to those disclosed in the specification. It is apparent that applicants were not in possession of yet-to-be discovered ligands for the TANGO-69 receptor, and therefore could not teach how to make and use variant proteins which bind or modulate yet-unknown ligands.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance." Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary E. Mosher, Ph.D. whose telephone number is 571-272-0906. The examiner can normally be reached on M-T and alternate F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Housel can be reached on 571-272-0902. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

6/21/04


MARY E. MOSHER
PRIMARY EXAMINER
GROUP 1800 1600

IN THE CLAIMS:

Claims 1-22. (Cancelled)

Claim 23. (Currently Amended): An isolated polypeptide which is produced by expression of ~~encoded by~~ a nucleic acid molecule comprising a nucleotide sequence which is at least 95% identical to the nucleotide sequence of SEQ ID NO:19, or the coding region of the cDNA insert of the plasmid deposited with ATCC as Accession Number 207173, ~~or a complement thereof~~, wherein the polypeptide has an activity selected from the group consisting of:

(i) the ability to bind a TANGO-69-receptor ligand; and

(ii) the ability to modulate the interaction of a TANGO-69-receptor ligand with mHVEM;

wherein said TANGO-69-receptor ligand is selected from the group consisting of LIGHT/TANGO-69, lymphotoxin α , and HSV gD.

Claim 24. (Currently Amended): The polypeptide of claim 23, produced by expression of ~~encoded by~~ a nucleic acid molecule comprising a nucleotide sequence which is at least 98% identical to the nucleotide sequence of SEQ ID NO:19, or the coding region of the cDNA insert of the plasmid deposited with ATCC as Accession Number 207173, ~~or a complement thereof~~.

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Claim 25. (Currently Amended): An isolated polypeptide which is produced by expression of ~~encoded by~~ a nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:19.

Claim 26. (Currently Amended): An isolated polypeptide comprising an amino acid sequence which is at least 95% identical to the amino acid sequence of SEQ ID NO:18, wherein the polypeptide has an activity selected from the group consisting of:

(i) the ability to bind a TANGO-69-receptor ligand; and

(ii) the ability to modulate the interaction of a TANGO-69-receptor ligand with mHVEM₁

wherein said TANGO-69-receptor ligand is selected from the group consisting of LIGHT/TANGO-69, lymphotoxin α , and HSV gD.

Claim 27. (Currently Amended): The polypeptide of claim 26, wherein the amino acid sequence is at least 98% identical to the amino acid sequence of SEQ ID NO:18, wherein the polypeptide has an activity selected from the group consisting of:

(i) the ability to bind a TANGO-69-receptor ligand; and

(ii) the ability to modulate the interaction of a TANGO-69-receptor ligand with mHVEM₁

wherein said TANGO-69-receptor ligand is selected from the group consisting of LIGHT/TANGO-69, lymphotoxin α , and HSV gD.

Claims 28-29. (Canceled)

Claim 30. (Currently Amended): An isolated polypeptide which is produced by expression of ~~encoded by~~ a nucleic acid molecule comprising a nucleotide sequence which is at least 95% identical to the nucleotide sequence of SEQ ID NO:19, or the coding region of the cDNA insert of the plasmid deposited with ATCC as Accession Number 207173, ~~or a complement thereof~~, wherein said polypeptide is soluble, lacks a transmembrane domain and a cytoplasmic domain, and exhibits an activity selected from the group consisting of:

- (i) the ability to bind a TANGO-69-receptor ligand: and
 - (ii) the ability to modulate the interaction of a TANGO-69-receptor ligand with mHVEM;
- wherein said TANGO-69-receptor ligand is selected from the group consisting of LIGHT/TANGO-69, lymphotoxin α , and HSV gD.

Claim 31. (Currently Amended): The polypeptide of claim 30, produced by expression of ~~encoded by~~ a nucleic acid molecule comprising a nucleotide sequence which is at least 98% identical to the nucleotide sequence of SEQ ID NO:19, or the coding region of the cDNA insert of the plasmid deposited with ATCC as Accession Number 207173, ~~or a complement thereof~~.

Claim 32. (Currently Amended): An isolated soluble polypeptide comprising an amino acid sequence which is at least 95% identical to the amino acid sequence of

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SEQ ID N0:18, wherein said protein lacks a transmembrane domain and a cytoplasmic domain, and exhibits an activity selected from the group consisting of:

- (i) the ability to bind a TANGO-69-receptor ligand; and
- (ii) the ability to modulate the interaction of a TANGO-69-receptor ligand with mHVEM;

wherein said TANGO-69-receptor ligand is selected from the group consisting of LIGHT/TANGO-69, lymphotoxin α , and HSV gD.

Claim 33. (Canceled)

Claim 34. (Currently Amended): The polypeptide of claim 32, wherein the amino acid sequence is at least 98% identical to the amino acid sequence of SEQ ID N0:18, wherein the polypeptide has an activity selected from the group consisting of:

- (i) the ability to bind a TANGO-69-receptor ligand; and
- (ii) the ability to modulate the interaction of a TANGO-69-receptor ligand with mHVEM;

wherein said TANGO-69-receptor ligand is selected from the group consisting of LIGHT/TANGO-69, lymphotoxin α , and HSV gD.

Claim 35. (Previously Presented): The polypeptide of claim 23, further comprising heterologous amino acid sequences.

Claim 36. (Previously Presented): The polypeptide of claim 26, further comprising heterologous amino acid sequences.

Claim 37. (Previously Presented): The polypeptide of claim 30, further comprising heterologous amino acid sequences.

Claim 38. (Previously Presented): The polypeptide of claim 32, further comprising heterologous amino acid sequences.

Claim 39. (Previously Presented): An isolated polypeptide comprising the amino acid sequence of SEQ ID N0:18.

Claim 40. (Previously Presented): The polypeptide of claim 39, further comprising heterologous amino acid sequences.

Claim 41. (Currently Amended): An isolated polypeptide comprising an amino acid sequence produced by expression of a nucleic acid molecule comprising -encoded by the cDNA sequence of the plasmid deposited with ATCC as Accession Number 207173.

Claim 42. (Previously Presented): The polypeptide of claim 41, further comprising heterologous amino acid sequences.

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IN THE SPECIFICATION:

The first paragraph of the specification has been amended to read:

Related Applications

This application is a continuation of U.S. application serial number 09/342,767, filed June 29, 1999, now abandoned, which is a continuation-in-part application of U.S. Serial Number 09/146,950, filed Sep. 3, 1998, now U.S. Patent 6,287,808, both of which are hereby incorporated by reference.